DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-017726
Date Inspected: 23-Oct-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 700
OSM Departure Time: 1900
Location: Shanghai, China

CWI Name:	Qiu Wen	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes ☐ No ☐ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☑ Yes ☐ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: TOWER & OBG Components

Summary of Items Observed:

On this date Caltrans Office of Structural Materials Quality Assurance Inspector, Sandeep Kumar (QA) was present during the times noted above for observations relative to the work being performed.

BAY#10

ORTHOTROPIC BOX GIRDER (OBG) AT BAY#10
This QA Inspector observed the following work in progress
Fluxcored Arc Welding (FCAW):
Weld joint # 16 located on Bike Path, bottom cover plate BK004A2 – 028. Welder is identified as 057180. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – B – L1b – F. (See attached photo)

Repair welding of weld joint # 43 located on Bike Path, top cover plate to side plate BK004A1 – 027 as per the Weld Repair Report #B-WR16107. Welder is identified as 040302. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – 345 – FCAW – 2G (2F) – Repair.

Weld joint # 18 located on Bike Path, bottom cover plate BK004A2 – 028. Welder is identified as 052075. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2231 – B – L1b – F.

Shielded Metal Arc Welding (SMAW):
Repair welding of weld joint # 44 located on Bike Path, top cover plate to side plate BK004A1 – 027 as per the Weld Repair Report #B-WR16122. Welder is identified as 052493. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – 345 – SMAW – 1G (1F) – Repair.

Repair welding of weld joint # 44 located on Bike Path, top cover plate to side plate BK004A1 – 027 as per the Weld Repair Report #B-WR16122. Welder is identified as 056364. ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – 345 – SMAW – 4G (4F) – Repair.

BAY#11

This QA Inspector observed the following work in progress
Shielded Metal Arc Welding (SMAW):
Weld joint # 06B located on Lift-5 Bracket ND1 – BRSA5 – 2. Welder is identified as 041271. ZPMC Quality Control (QC) Inspector is identified as Li Bin. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3212 – Tc – U5b.

Weld joint # 06B located on Lift-5 Bracket ND1 – BRSA5 – 2. Welder is identified as 040690. ZPMC Quality Control (QC) Inspector is identified as Li Bin. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3212 – Tc – U5b.
(See attached photo)

Witness of Ultrasonic Testing (UT)
This QA inspector Witnessed 100% UT performed by ZPMC Quality Control personnel. During the process ZPMC UT technician found Two (2) class ‘A’ non conforming indication as per AWSD1.5 Table 6.3. The member is identified as Tower Component. The component and weld designation identified as follows:
LIFT-5, BRACKET
SD1 – BRSA5 – 1 – 14A

ORTHOTROPIC BOX GIRDER (OBG) AT BAY#11
This QA Inspector observed the following work in progress
Fluxcored Arc Welding (FCAW):
Weld joint # 43 located on Bike Path BK004A1 – 019. Welder is identified as 040704. ZPMC Quality Control (QC) Inspector is identified as Xu Jie. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – B – U2 – F.

Weld joint # 43 located on Bike Path BK004A1 – 019. Welder is identified as 053316. ZPMC Quality Control (QC) Inspector is identified as Xu Jie. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2232 – B – U2 – F.

Shielded Metal Arc Welding (SMAW):

Weld joint # 021 located on Bike Path, BK004ASD1 – 023. Welder is identified as 054460. ZPMC Quality Control (QC) Inspector is identified as Xu Jie. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2212 – B – U2.

Weld joint # 006 located on Bike Path, BK004ASD1 – 019. Welder is identified as 040724. ZPMC Quality Control (QC) Inspector is identified as Xu Jie. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2213 – B – U2.

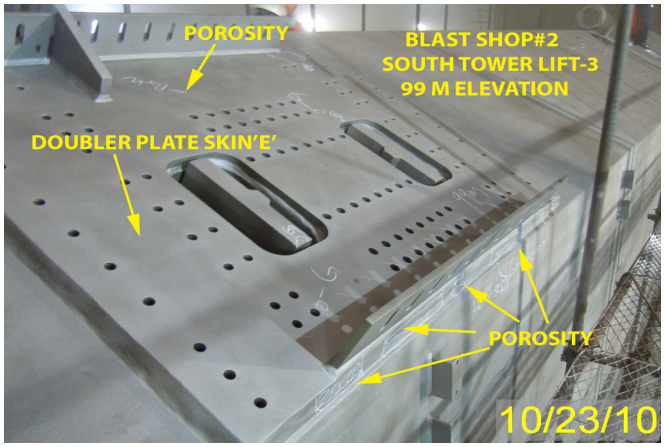
Weld joint # 018 located on Bike Path, BK004ASD1 – 023. Welder is identified as 054460. ZPMC Quality Control (QC) Inspector is identified as Xu Jie. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2213 – B – U2.

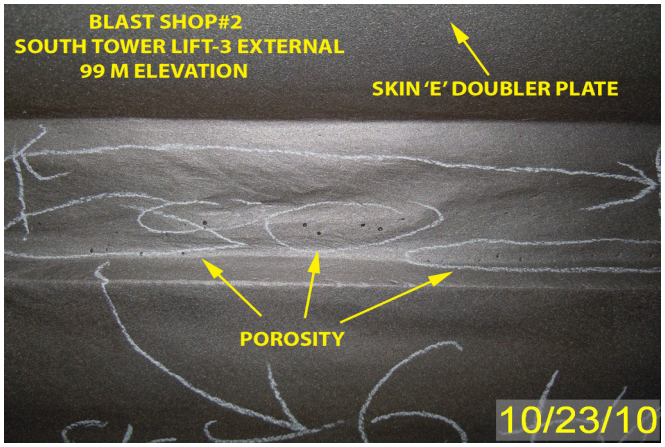
Weld joint # 005 located on Bike Path, BK004ASD1 – 019. Welder is identified as 040724. ZPMC Quality Control (QC) Inspector is identified as Xu Jie. The welding variables recorded by QC appeared to comply with the WPS – B – P – 2212 – B – U2.

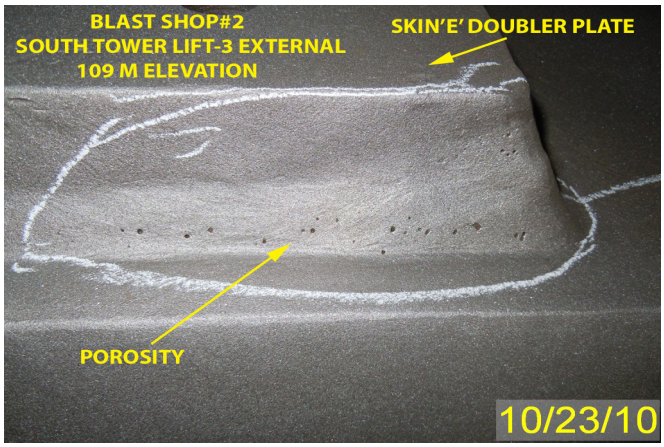
BLAST SHOP#2
This QA Inspector observed the following work in progress
During the External pre-blast visual inspection on South tower Lift-3; these Quality Assurance Inspector's (QA) discovered the defects required welding and Magnetic particle testing on weld and base material at the following locations:
1) Skin 'E' – Porosity –Doubler plate to Skin'E' weld close to D/E corner at 109 M elevation.
2) Skin 'E' – Porosity –Doubler plate to Skin'E' weld close to A/E corner at 99 M elevation.
3) Skin 'E' – Porosity –Doubler plate to Skin'E' weld close to D/E corner at 99 M elevation.
4) Skin C/D corner – Arc gouge –Bottom face of the C/D corner weld at 83 M elevation.
5) Skin 'A' – Arc gouge – at 105 M elevation close to A/E corner.

For further information, please see the attached pictures below.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.







Summary of Conversations:

No Relevant Conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Thomas Ho- 15002048250, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

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Inspected By:	Kumar,Sandeep	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer